

REMARKS

Claims 18, 23-25 and 27 are pending. Claim 18 is currently amended. Claims 19-22 and 26 are canceled without prejudice. As such, none of these amendments constitutes new matter. Cancelation of subject matter herein is without prejudice to the prosecution of said subject matter in other patent applications.

The rejection of claim 18 on grounds of indefiniteness has been withdrawn. The previously pending claims are rejected as unenabled, lacking description, anticipated and/or obvious. For reasons to be set forth below, the rejections should be withdrawn and the presently pending claims should be allowed to issue.

1. The Claims Are Enabled

Claims 18-27 are rejected, under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the enablement requirement because the claims allegedly “contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.” The Examiner has been persuaded to concede the validity by the Applicants’ prior arguments (Response filed March 22, 2006) regarding the number of backcrosses. However, according to the Examiner, the enablement rejection of claims 18-27 is only partially overcome (page 4, Official Action mailed June 14, 2006).

Applicants respectfully disagree with the rejection, and submit that the pending claims, as amended, are fully enabled by the originally filed specification, drawings and claims.

As a preliminary matter, Applicants respectfully request the withdrawal of rejection of canceled claims 19-22 and 26.

According to the Examiner, the presently claimed invention is not enabled because it broadly claims applicability to different maize lines and plant types while only disclosing the use of the A188 and Hi-II lines (page 3, Official Action mailed June 14, 2006).

Applicants have amended claim 18 to limit the parental line of the claimed hybrid plant to the A188 and Hi-11 lines, thus obviating the present grounds for rejection. Applicants respectfully request that the rejections under 35 U.S.C. §112, first paragraph be removed in light of the present amendments.

2. The Claims Are Supported By The Specification

Claims 18-27 are rejected under 35 U.S.C. §112, first paragraph for allegedly failing to comply with the written description requirement. The Examiner alleges that the claims contain subject matter which was not described in the specification to reasonably convey that the inventors had possession of the claimed invention at the time the application was filed.

The Examiner has contended that the claims fail to comply with the written description requirement due to alleged absence of support of the broadly claimed genus of any maize genotype. The Examiner alleges that specification discloses only a single exemplified species (page 5, Official Action mailed June 14, 2006). Applicants have amended claim 18 to limit the parental line of the claimed hybrid plant to the A188 and Hi-11 lines. Transformed plants in which a parent belongs to the A188 and related Hi-11 line, is fully supported in the specification as filed, thus obviating the present grounds for rejection. For the aforementioned

reason, Applicants respectfully request that the rejection under 35 U.S.C. §112, first paragraph be removed.

3. The Claims Are Not Anticipated

Claims 19 and 20 are rejected under 35 U.S.C. §102(b) as being anticipated by Ragot *et al.* (*Techniques et utilizations des marquers moleculaires*; Montpellier (France) 29-31 Mar 1994; Ed. INRA, Paris 1995 (*Les Colloques*, n 72; pages 45-56; hereinafter Ragot *et al.*)). According to the Examiner, the isotransgenic corn plant taught by Ragot *et al.*, only differs from the plant of the present invention by the method of making. Applicants have canceled claims 19 and 20, so that the grounds for rejection are obviated. Accordingly, it is requested that the rejection for lack of novelty be withdrawn.

4. The Claims Are Not Obvious

Claims 18-27 are rejected under 35 U.S.C. §103(a) as allegedly being obvious over Ishida *et al.*, (*Nature Biotech.* (1996) 14:745-750; hereinafter “Ishida *et al.*”) in view of Does *et al.*, (*Plant Mol. Biol.* (1991) 17:151-153; “hereinafter “Does *et al.*”), Hiei *et al.*, (*Plant Journal* (1994) 6(2):271-282; hereinafter “Hiei *et al.*”), Armstrong *et al.*, (*Theoretical and Applied Genetics* (1992) 84:755-762; hereinafter “Armstrong *et al.*”) and Ragot *et al.*.

The Examiner states (page 7-8, Official Action mailed June 14, 2006):

“The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference, nor is it that the claimed invention must be expressly suggested in any one or all the references. The test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 41

3, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091,231 USPQ 375 (Fed. Cir. 1986).

In response to Applicant's arguments against the references individually (see page 14, last two lines to page 16, lines 1-4 of 'REMARKS' filed March 22, 2006), one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 41 3, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091,231 USPQ 375 (Fed. Cir. 1986).

Finally, the instant claim scope is not commensurate with Applicant's evidence of unexpected results. Applicant only provides evidence of hybrids which have either A1 88 or Hi-II as one parent. In contrast, the claims are broadly drawn to the use of any maize line as a parent. See *In re Lindner*, 173 USPQ 356 (CCPA 1972) and *In re Grasselli*, 218 USPQ 769 (Fed. Cir. 1983) which teach that the evidence of non-obviousness should be commensurate with the scope of the claims."

Applicants respectfully disagree and reiterate that the pending rejection fails to establish *prima facie* obviousness, *i.e.* all the claim limitations must be taught or suggested by the prior art (*In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). *In re Wilson*, 424 F.2d 1382, 1385, 165 U.S.P.Q. 494,496 (C.C.P.A. 1970) states that "All words in a claim must be considered in judging the patentability of that claim against the prior art."

As noted in the previous Response (page 14, Official Action mailed June 14, 2006) the Examiner's analysis of the references is as follows: Ishida *et al.* teaches transformation of a hybrid plant, but does not teach selection of hybrid transgene positive primary transformants or backcrossing to produce an isotransgenic line; Does *et al.*, and Hiei *et al.*, teach methods of screening to identify transgene positive transformants using primers from flanking T-DNA sequences; Armstrong *et al.*, teach a method of RFLP analysis and a backcrossing strategy; and

Ragot *et al.*, teach a method to rapidly obtain a (nearly) isotransgenic line by a backcrossing strategy used in conjunction with combined selection with an agent and molecular markers.

Contrary to the Examiner's view, Applicant's have not "attack[ed] references individually" but have merely considered and broken down the teachings of each reference so as to demonstrate that when combined, the cited references do not render the present invention obvious. In reiterating the rejections, the Examiner has not responded to any of the factual or technical rebuttals raised by the Applicants in the previous response (pages 7-8, Response mailed March 20, 2006). The Examiner is requested to reconsider the rejection in light of the specific factual issues raised previously and herein.

Applicant's noted in their prior response that none of the above cited references, when considered singly or in combination, suggest a specific step for the positive identification of a transgenic plant that contains T-DNA integrated only into the genome of the line of interest. Applicant's reiterate that the selection step specified in claim 18 (b) clearly distinguishes the present invention from the combination of references cited by the Examiner.

As described in the prior response, the cited references when considered in combination, in no way teach or suggest a strategy of screening for an integration event in a desired agronomically important genome. If anything, when combined, the cited reference, teach that obtaining an isotransgenic plant merely requires the application of adequate selection pressure at each stage of the backcross so that undesired genetic elements are crossed out.

That the present invention is not suggested by the cited references in combination and in fact represents an unexpected success in generating truly isotransgenic plants is summed up by the following statements:

"[p]roduction of fully converted isogenic lines through backcrossing procedures is a lengthy procedure, if at all possible (Ragot *et al.*, page 45, first paragraph).

[t]herefore the true linkage drag value of the selected BC₄ is likely to be less than 1.3% of the genome (Ragot *et al.*, page 55, second paragraph).

[t]hese results clearly demonstrate that molecular markers provide important time and quality advantages over classical procedures for the production of near-isogenic lines through backcrossing (Ragot *et al.*, page 55, second paragraph)."

Taken together with the fact that an infinite number of backcrosses would be required to obtain a truly isotransgenic line, an argument previously presented by the Examiner, the combination of cited prior art demonstrate that the results would not have been expected.

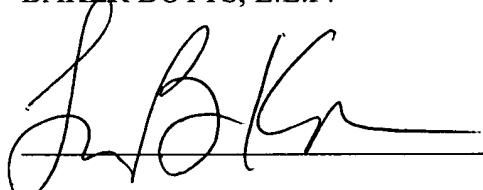
The Examiner is requested to reconsider the obviousness rejection in view of the above arguments as well as in light of currently amended claims, which Applicants believe are commensurate with the scope of the disclosed invention. As such, Applicants respectfully request that the rejections under 35 U.S.C. §103(a) be withdrawn.

CONCLUSION

Applicants believe that in light of the foregoing amendments and remarks, the claims are in condition for allowance, and accordingly, respectfully request withdrawal of the outstanding objections and rejections. The Examiner is kindly invited to contact the undersigned if helpful to advance the application to allowance, which is earnestly sought.

Respectfully submitted,

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